

Pam:616: (*49)
KRU

The health of Alaskans: An assessment of the prevalence of behaviors posing health risks

Prepared for

The Alaska Department of Health and Social Services
Health Education Risk Reduction Project

by

John A. Kruse
Elsa Aegerter
Institute of Social and Economic Research
University of Alaska
707 A Street
Anchorage, Alaska 99501

February 1983

POLAR
PAM
3969

POLARPAM

The health of Alaskans: An assessment of the prevalence of behaviors posing health risks

Prepared for

The Alaska Department of Health and Social Services
Health Education Risk Reduction Project

by

John A. Kruse
Elsa Aegerter
Institute of Social and Economic Research
University of Alaska
707 A Street
Anchorage, Alaska 99501

February 1983

BOREAL INSTITUTE
LIBRARY

57868

Rec'd: 15 Oct 1984
Order No. 1
Price: NF
Acc. No.: Alaska. Dept of Health
+ Social Services.

Introduction

Traditionally, government intervention to improve public health has focused on communicable diseases. Today, however, most of the deaths and illnesses which occur in the United States as a whole and in Alaska in particular result from things people do themselves. Ex-

amples of behaviors which pose health risks include smoking, drinking, and lack of exercise. Untreated conditions such as being overweight or having high blood pressure or high cholesterol levels also result in needless illness or death. To assess the prevalence of these

health risks, the Alaska Department of Health and Social Services asked the Institute of Social and Economic Research to conduct a survey of Alaskan adults. This report contains an overview of the survey results.

Study Design

The Federal Center for Disease Control (CDC) developed a questionnaire to assess health risks, and we used a modification of the questionnaire. The CDC and Alaskan questionnaires differ primarily in format; we attempted to make it easier for interviewers and data-entry people to use the questionnaire and changed the order in which question topics appeared so that the interview would start with questions that are relevant to most Alaskans. In addition, we added several questions of particular interest in Alaska, including a question on whether or not Alaskans think the state should have programs which attempt to get Alaskans to lead more healthy lifestyles.

CDC has developed a simple, but effective, set of procedures for contacting a random sample of adults. The CDC approach assumes that virtually every adult can be reached

through a residential telephone number. To assess the validity of this assumption, we contacted 29 Alaskan telephone companies and determined that 86 percent of the state's population live in communities in which at least 80 percent of the households have telephones. Outside of Anchorage, Fairbanks, Juneau, Ketchikan, Sitka, and the Mat-Su and Kenai Boroughs, however, only 47 percent of the population live in communities with adequate telephone service (i.e., 80 percent or more). Therefore, it is impossible to conduct a survey of Alaskan adults without resorting to some face-to-face interviews, a substantially more expensive means of data collections.

On the basis of this information and cost assumptions derived from our past survey experience in Alaska, we developed a preliminary sample design involving a mixed sampling strategy of telephone and

face-to-face interviews. We refined the design during discussions with CDC sampling consultants. The final sample design is presented in Table 1. It represents a compromise between the objective of developing reliable statewide estimates and the objective of differentiating between urban and rural conditions.

We hired and trained 14 interviewers during the week of September 13, 1982. Telephone interviews began September 18 and face-to-face interviewing began October 11. We completed our field work on November 17, 1982. Our final sample consisted of 846 interviews, reflecting a 78 percent response rate. The sample includes 250 Anchorage interviews, 248 interviews in other urban areas, and 348 rural interviews.

The telephone sample frame included all prefixes in Alaska in which 80 percent or more of

Table 1 — Final sample design

	Desired Number of Telephone Interviews	Desired Number of Face-to-Face Interviews	Total Number of Interviews
Anchorage	250	—	250
Other Rural*	250	—	250
Rural	175	147	<u>322</u>
			822

*Includes Fairbanks, Juneau, Ketchikan, Sitka, Kenai Peninsula Borough, and Matanuska-Susitna Borough.

the households possessed residential telephones. We calculated the degree of telephone coverage from individual utility records as of the spring of 1982 and from 1980 census statistics. In order to raise the probability of randomly dialing a residential number, we analyzed published telephone listings and eliminated sequences of numbers which contained no residential numbers. Once we refined the telephone sample frame, we programmed the University of Alaska computer to generate random numbers for each prefix. The number of sample elements drawn for each prefix varies according to the number of households served by the prefix. Thus, we can determine the probability of selection of a household in each prefix. These probabilities are equal within

each of the three sample strata (Anchorage, other urban, and rural).

The face-to-face sample frame consisted of all places of 25 persons or more not included in the telephone sample frame. We selected 30 places with probabilities of selection proportional to place size. We then listed all housing units in each selected place, calculated the sampling fraction necessary to choose 12 housing units and attempted to interview one randomly selected adult in each of the 12 housing units. As in the case of the telephone sample, we recontacted the household until we obtained an interview with the originally selected respondent or until we decided that further attempts would not be worthwhile (households in the latter category count against the response rate). Finally, we

verified the disposition of 10 percent of the numbers drawn in the telephone sample.

We edited all of the completed interviews and prepared them for data entry. J and J Enterprises of Anchorage entered the data on machine-readable computer disks and performed a 100 percent verification of their work. J and J then produced a computer tape which we installed in the University computing system. We then constructed a computer program file and produced a data dictionary along with a permanent computer file consisting of the original data, constructed variables, variable labels, value labels, and missing data specifications. Anyone with a moderate familiarity with computers could access this file and conduct their own analyses.

Maximum estimated sampling errors (percent)

Observed Proportions

Number of Interviews	10 or 90%	20 or 80%	30 or 70%	40 or 60%	50%
850	2	3	3	3	3
500	3	4	4	4	4
200	4	6	6	7	7
100	6	8	9	10	10
50	8	11	13	14	14

The data file also includes a weighting variable designed to:

- Adjust for deliberate over-sampling in rural areas.
- Adjust for the under-sampling of adults in larger households (a product of conducting one interview per household).
- Adjust for the under-sampling of young male adults (a product of the selection table we used).
- Adjust for the over-sampling of households with more than one telephone number.

The weighting variable should be applied when using the data to estimate the characteristics of any group of Alaskan adults.

All of the survey results are subject to sampling errors, an inevitable product of the fact that we are using a sample of

adults, 18 years old or older, to generalize to the entire adult population. Estimated sampling errors are larger for survey results which are based on relatively fewer interviews or which vary widely across the population. The following table provides a rough guide for estimating sampling errors.

To use the table, find the table cell which corresponds to the particular survey proportion you are considering. For example, 37 percent of 846

respondents currently smoke. The appropriate sampling error is located in the first row and in the fourth column. Loosely interpreting the meaning of sampling errors, you can be 95 percent sure that the true population proportion lies between 37 \pm 3 percent or 34-to-40 percent.

Survey data is subject to additional sources of error; unfor-

tunately, the size of these errors is impossible to determine without expensive, further studies. Of particular concern in this study is response bias. For example, we think respondents significantly underreported the amount of alcohol they drink. We cannot tell, however, the extent of underreporting and, therefore, cannot adjust the data or attach a range of estimates around the observed survey results. We can only advise data users to apply their own expertise and experience to the interpretation of the data.

The fact that 37 percent of the adult population in Alaska currently smoke is not as interesting as the fact that an estimated 90,000 Alaskan adults currently smoke. Translating survey proportions into population estimates is an easy matter. According to 1980 U.S. Census

figures, the number of Alaskan adults not living on military bases and not living in institutional quarters (e.g., hospitals, jails, dormitories, nursing homes) is 240,194. To derive a

population estimate, multiply the proportion being considered by the appropriate population figure. If the proportion applies to the entire population, multiply the proportion by 240,194

(e.g., $.375 \times 90,100 = 88,872$). In reports, round the results so as not to mislead people into thinking that your estimates are more precise than they really are.

Survey Results

Blood Pressure

The vast majority of Alaskan adults (89 percent) report that they have had their blood pressure checked in the last two years. Based on the survey results, we estimate that

some 44,000 Alaskans have been told that they have high blood pressure and about 6,000 believe that their blood pressure is still high. Only an estimated 200 Alaskans, however, believe that they still have high blood

pressure yet are not regularly following their prescribed treatment.

Exercise

We estimate that 7,400 Alaskan adults get virtually no

Table 2 — Weekly physical activity

Frequency of Active Exercise ¹	Frequency of Light Exercise ²	Level of Physical Effort in Daily Activities ³	Proportion of Population	Estimated Number of Alaskan Adults
none	none	light	3%	7,400
none	1-7 times per week	light	8%	19,300
none	0-7 times per week	medium	22%	53,400
once per week	0-7 times per week	light or medium	23%	53,700
none or once/week	0-7 times per week	heavy	9%	22,200
2-to-3 times/week	0-7 times per week	light to heavy	20%	46,900
4 or more times/wk.	0-7 times per week	light to heavy	15%	34,700

¹Examples of active exercise include running, skiing, and calisthenics.

²Examples of light exercise include gardening, dancing, and bowling.

³Light daily activities include office work, driving, or sitting; medium daily activities include walking, housework, or carpentry; and heavy daily activities include moving heavy loads.

exercise (see Table 2). On the other hand, some 104,000 actively exercise at least two times a week or work in a physically demanding job. In between, we find that about 126,000

Alaskans participate in some exercise at least weekly or work in a job that involves moderate physical activity — walking, housework, or carpentry, for example.

The main forms of physical exercise in Alaska are running or walking (28 percent), wage work (19 percent), housework (13 percent), calisthenics (5 percent), team sports (4 percent), and wood cutting (3 percent). Since these activities only comprise 72 percent of the main forms of physical exercise in Alaska, variability is clearly the rule, not the exception. It is clear, however, that most Alaskans (58 percent) get more exercise in the summer than they do in the winter. Only 12 percent of Alaskan adults think that they get equal amounts of exercise year-round.

Since there are so many ways to actively exercise, it is difficult to identify groups which overall get too little exercise. CDC uses an exercise index reflecting the amount of light and heavy exercise and the amount of physical effort required in daily activities to compare the overall amount of exercise experienced by persons of different sex, ages, and ethnic backgrounds. We think the

CDC index may give too little weight to the amount of exercise many Alaskans get in their daily activities. Taken at face value, however, the index scores suggest that, on the average, women, Natives, and persons over 65 engage in fewer physical activities than men, Non-Natives, and younger persons.

Weight and Cholesterol Level

Almost a third of the Alaskan adult population think of themselves as being overweight. In most cases, they are right; 74 percent of those that perceive of themselves as overweight weigh 110 percent or more than the median weight for their sex and height. About 10 percent, or 24,000 Alaskans, weigh at least 130 percent of the median weight for their sex and height. For example, for a six-foot man to be 130 percent of his median weight, he would weigh 222 pounds. Not surprisingly, adults between the ages of 45 and 64 are relatively more likely to be overweight. Thirty-one percent of this group weighs at least 130 percent of the median weight appropriate to their height compared to 14 percent of both younger and older age groups.

Only 8,200 Alaskans (3 percent) are under medical advice to reduce or maintain their cholesterol level and, of these, only an estimated 2,000 are not following their physicians medical advice.

Stress

In our survey, we did not attempt to identify situations which may cause an individual to experience stress. The measurement of stress itself is extremely difficult in a short interview and the two questions on stress developed by CDC are crude, at best. In response to the question,

During the past year, how often were you unable to do your daily activities because of worry or nervousness; would you say: often, sometimes, rarely, or never?

2 percent of our respondents said often; 10 percent said sometimes; 21 percent said rarely; and 67 percent said never. We cannot tell how many respondents interpreted the question to refer to times that they literally were immobilized or how many interpreted the question to refer to times that their productivity was reduced. We can estimate that some 78,000 Alaskans at least occasionally experience stress that affects their daily activities. There appear to be no major differences in the prevalence of stress by region, age, or race. Women are more likely to report that stress at least occasionally interferes with their daily activities (44 percent among women versus 22 percent among men).

The second CDC stress question asks:

How often do you get up-tight or irritable with those around you; would you say: often, sometimes, or rarely?

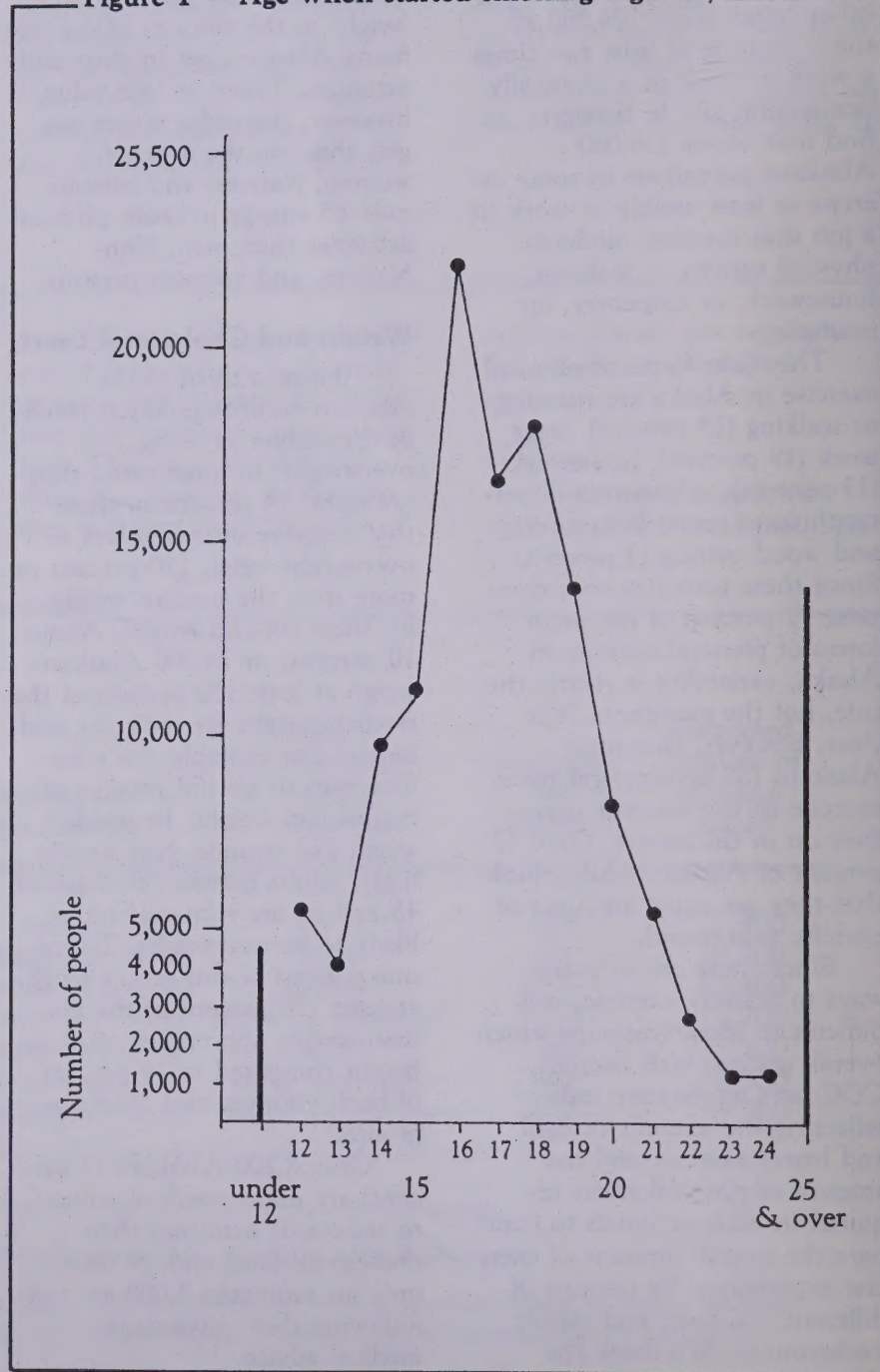
In response to this question, 12 percent, or an estimated 29,000 Alaskans, said often. Younger adults appear somewhat more likely to perceive that they become up-tight or irritable, as do women. Combining responses to the two questions on stress, we find that 48 percent of the population feel that stress never interferes with their daily activities and that they are rarely irritable or uptight.

Unfortunately for their health, one-in-four Alaskans smoke cigarettes to cope with stress. The second most popular choice differs by sex: men are more likely to exercise, and women are more likely to eat. Few Alaskans (5 percent) perceive that they drink to cope with stress.

Smoking Cigarettes

We estimate that 90,100 Alaskans, 18 years old or older, currently smoke cigarettes. Based on the survey results, some 27,100 Alaskan adults smoke more than one pack of cigarettes per day. Smoking is just about equally prevalent among women (35 percent) as it is among men (40 percent) and among 18-to-34-year olds (37 percent) as it is among all age groups, ex-

Figure 1 — Age when started smoking regularly



cept 65 and older in which the percent who currently smoke drops to 13. A higher proportion of Alaska Natives currently smoke than non-Natives (47 percent versus 36 percent). At the same time, however, Alaska Native smokers tend to smoke fewer cigarettes per day; 24 percent of Native smokers consume more than two packs per day compared with 34 percent of non-Native smokers.

The critical age period when Alaskans picked up their smok-

ing habit is between 14 and 19 (see Figure 1). Since 60 percent of Alaska's adult population spent their teen-age years in other states, a maximum of only 40 percent of current smokers could be influenced by an anti-smoking program in Alaska's secondary schools.

Drinking Alcoholic Beverages

Based on sales of alcoholic beverages in Alaska, one would think that most Alaskans consume significant amounts of

alcohol. While the majority of Alaskans (79 percent) have had at least one alcoholic drink in the last year, our survey results suggest that the vast majority of Alaskans drink only small or moderate amounts of alcohol (see Table 3 and Figure 2). Only 3 percent of our respondents reported having at least five drinks on five or more occasions in the month previous to the survey.

Table 3 — Reported number of drinks consumed in average week over past year

Number of Drinks per Week	Percent	Estimated Number of People
None	27	64,100
Less than one	29	70,400
1 - 3	12	28,300
4 - 13	21	51,600
More than 13	11	25,700
	100	240,100

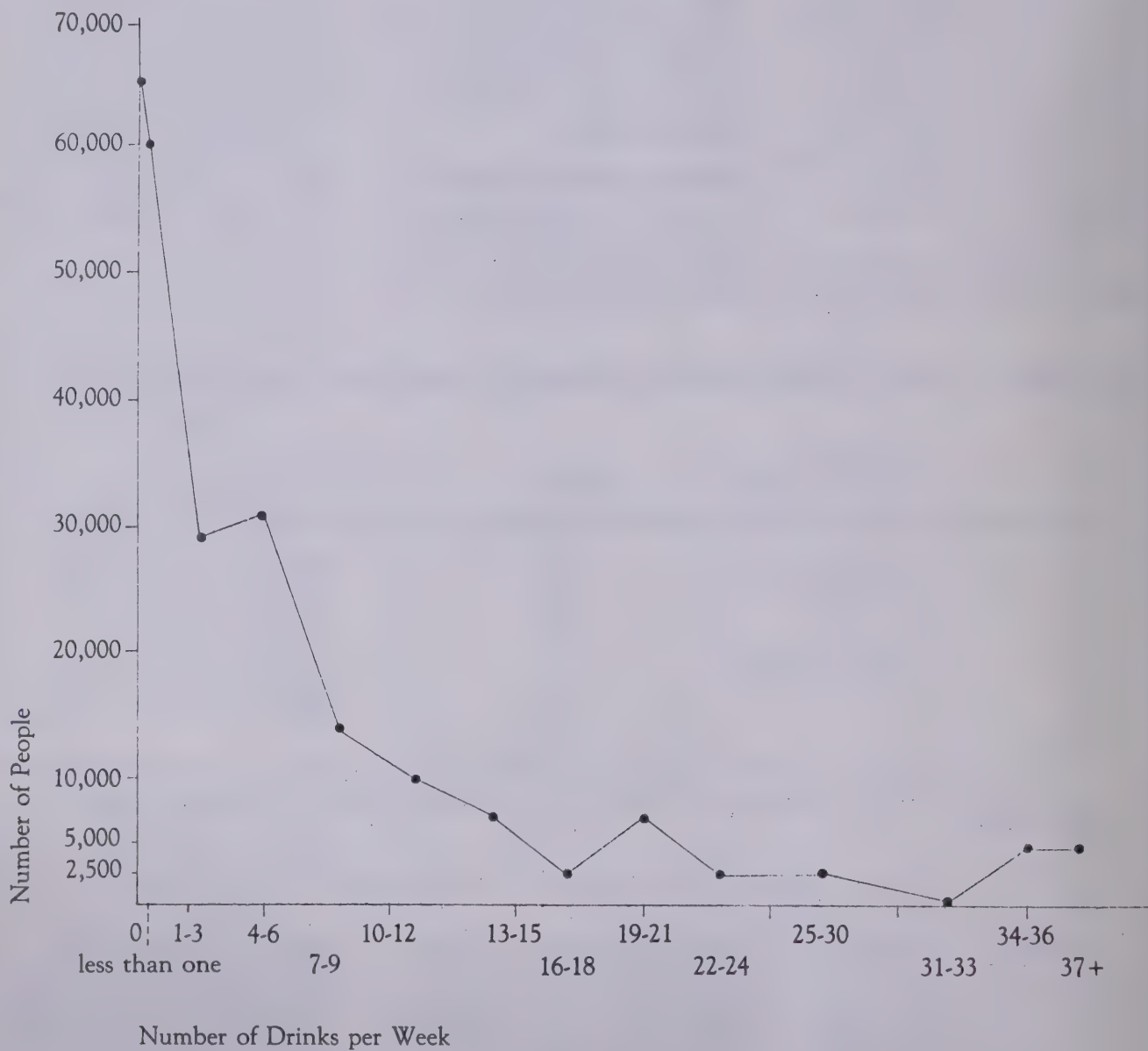
*A drink consists of one can or bottle of beer, one glass of wine, one mixed drink, or one shot of liquor.

We question the validity of these survey results. As we will show below, Alaskans are more concerned about alcohol abuse than any other health risk. No doubt this concern largely stems from the perception that alcohol

abusers are a threat not only to themselves but also to others. Although our respondents knew their answers would remain confidential, we think that the strong societal disapproval of alcohol abuse caused them to

understate the amount of alcohol they consume. Looking back to Table 3, we think that a significant proportion of those reporting that they consume an average of 4-to-13 drinks per week, in fact, consume more

Figure 2 — Reported number of drinks per week



than 13 drinks per week. Even if this is true, however, it is still difficult to use the survey results to estimate the number of alcohol abusers or alcoholics in the population.

The problem in interpreting the responses of Native Alaskans is particularly acute. By their reports, 46 percent consumed no alcohol in the previous twelve months, and an additional 33 percent reported drinking an average of less than one drink per week. Natives living in legally "dry" villages may be reluctant to admit that they consume any alcohol. Therefore, the Native responses may not only understate the amount of alcohol consumed but may also understate the proportion of Natives who drink at all. We did include a question specifically asking about binge drinking (a phrase commonly used in rural Alaska) and found that only 6 percent of our respondents (an estimated 2,600 Natives) said that they had gone on at least one binge of drinking in the previous year. Again, this figure may underestimate the frequency of alcohol use.

Assuming that the group of respondents who report consuming more than 13 drinks a week contains most of the heavy drinkers who fell into the sample, we can construct a profile of the most common heavy drinker. Because of the prevalence of young people in Alaska, the largest number of

heavy drinkers are between 18 and 34 years old. Proportionately, however, more adults between the ages of 45 and 54 and, particularly, between the ages of 55 and 64 drink heavily. One-in-five adults, in the 55-to-64 age group reported drinking more than 13 drinks a week. Men are almost three times as likely as women to consume more than 13 drinks per week.

Given the evidence that our survey respondents understate the amount they drink, the survey responses concerning driving while intoxicated are alarming. We asked,

How many times during the last four weeks have you driven a car, boat, or three-wheeler when you've had perhaps too much to drink?

Four percent of our respondents mentioned that they had done so at least once in the past month. This translates to an estimated 10,700 Alaskans. We observed no regional differences in response; but men, particularly young men, were the most likely to report that they drove while intoxicated. We are confident that responses to this question are understated even more than are the responses to other questions on alcohol use.

The final survey question on alcohol asked if respondents favored or opposed an increase in the tax on alcoholic beverages in order to pay for the treatment and prevention of

alcohol abuse. Seventy-eight percent of our respondents and an estimated 187,000 of 240,000 Alaskan adults said that they favor the tax increase. Public support for the tax increase is evenly spread across the state and among persons of different age, race, and sex.

Coincidence of Smoking, Drinking and Stress

We have seen that significant, but not in all cases, large numbers of Alaskans smoke or drink heavily and/or find that stress interferes with their daily activities. To what extent do these high-risk behaviors involve the same people? To answer this question, we defined heavy drinkers to be those who reported consuming five or more drinks on at least two occasions in the previous month. We defined heavy smokers to be those who say they smoke ten or more cigarettes a day, and we defined those under heavy stress to include respondents who said that stress makes them unable to perform their daily activities sometimes or often.

Under these definitions, only 1 percent of Alaskan adults both drink and smoke heavily and experience significant stress. Another 5 percent drink and smoke heavily and do not report significant stress. At the other extreme, 15 percent of the population reported that they consume no alcohol or cigarettes, nor do they feel that stress

makes them unable to perform their daily activities more than rarely. Seventy-nine percent of the population falls in between, with 37 percent reporting only one of the three high-risk behaviors and 42 percent reporting some combination of more than moderate-risk behaviors. Together, these results suggest that health risk behaviors are not concentrated among the same individuals but are spread across the adult population.

Personal Safety

Half of the Alaskan adult population (52 percent) seldom, if ever, use seat belts while driving. Seat belt use is relatively greater in Anchorage (38 percent nearly always use them) than in other urban areas or in rural Alaska (where the comparable proportions are 26 percent and 10 percent, respectively).
We designed the comparable question on the use of personal

floatation devices (PFDs) to reflect the Coast Guard requirement that PFDs be available on the boat but not necessarily worn. Under this liberal definition, 73 percent of Alaskan adults always have a PFD along when they ride in boats. Most Alaskans (82 percent) also think they can swim. However, the proportion of Alaskan adults who say they can swim varies by region, sex, and race (see Table 4).

Table 4 — Number of Alaskan adults who say they cannot swim

Total Estimated Number That Cannot Swim	43,200
Urban Residents	25,200
Rural Residents	18,000
Men	11,000
Women	32,200
Native	16,900
Non-Native	26,300

Attitudes Toward State Intervention

It is no secret that Alaskans, more than Americans in general, value personal freedoms and, therefore, a minimum of government interference. In designing the study, we thought that the prospect of the state's encouraging Alaskans to drink and smoke less, to exercise more, and to change other behaviors to improve their

health would encounter strong objections. To their credit, those coordinating this study within the Department of Health and Social Services (HSS) agreed to let us include a question which tests public support for existing and potential HSS programs.
The question asked was as follows:
Most of the deaths and illnesses in Alaska result from

things people do themselves. Some examples are drinking while driving, and smoking. Do you think the state should have programs to encourage Alaskans to lead healthy lifestyles?
In response, 86 percent said that they favored such programs. We also asked those who did not favor these programs, why. The primary objection was one we expected to find shared by more

Alaskans: the state shouldn't interfere with personal choices. Half of the 14 percent opposed to state intervention cited this as the basis of their objection. Thirty-five percent of those opposed felt that such programs wouldn't work and a small proportion (2 percent) either thought that there were better uses for state funds or that the programs would be too expensive to be worthwhile.

We asked the 86 percent favoring state intervention to tell us which of the following health areas is most important: alcohol abuse, stress, smoking,

exercise, diet, or accident prevention. By far the most important health area in the public's view is alcohol abuse. Sixty percent of those favoring state intervention and half of the population as a whole identified alcohol abuse as the most important health area. Accident prevention (13 percent), stress (8 percent), and exercise (7 percent) were also mentioned by some as the most important health area.

The survey results suggest that there is a consensus that reducing alcohol abuse should be the first priority of state health risk reduction programs.

The results should not be interpreted to mean, however, that alcohol abuse is viewed as four or five times more important than the next most frequent mentioned — accident prevention. We did not attempt to measure the relative importance of each health area, but rather we tried to determine the amount of public agreement about the most important health area. A majority of the public clearly agrees that reducing alcohol abuse is the first priority. They may also think that accident prevention, stress, and exercise are important as well.

Date Due

MAY 30 '87

57868

Pam:616:(*49)
KRU

KRUSE, John A. and AEGERTER, Elsa
AUTHOR
The health of Alaskans
TITLE

DATE
LOANED

BORROWER'S NAME

DATE
DUE

Alweizmann

MAY 30 '87

57868

BORAL INSTITUTE FOR NORTHERN STUDIES, LIBRARY
THE UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA T6G 2E9
CANADA

University of Alberta Library



0 1620 0335 4691